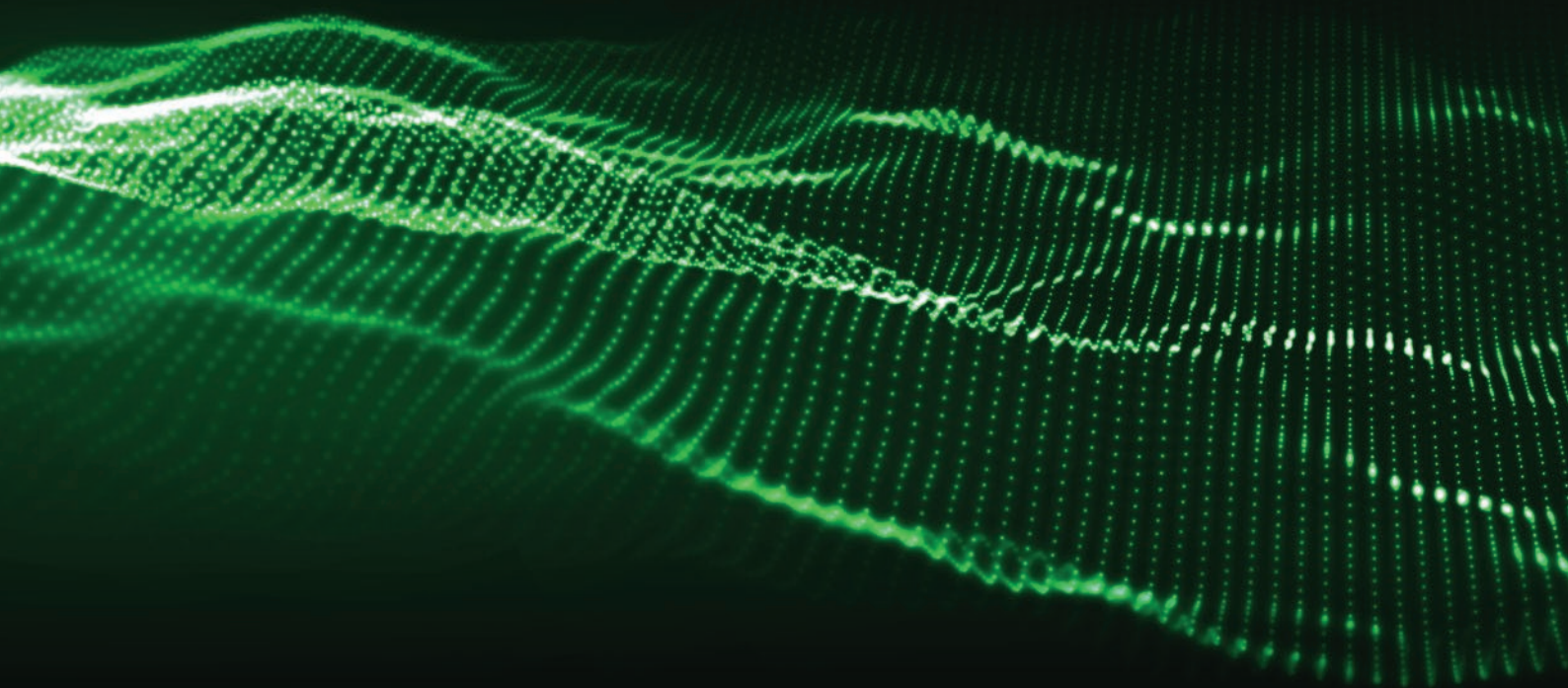




GAME FOR FUN, EARN FOR REAL

WHITE PAPER
v 1.2



LAST UPDATED: Nov20TH,2018

DISCLAIMER: This white paper represents work in progress and illustrates the intent of BUFF to develop, launch and market certain products. The implementation of these products are built on new technologies and as such, it is expected that modifications will be continually required to meet the evolving requirements of the market's and consumer's demands.

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Executive Summary

Nowhere in the gaming industry - mobile, desktop, or console - is there anything like a “Star Alliance” loyalty program.

So, we have decided to build BUFF - a decentralized loyalty platform that rewards gamers simply for playing.

Participants earn BUFF coins by playing their favorite games. The coin allocation process is performed in the background; therefore, it doesn't interfere with the gameplay or require any additional expenses (installing the BUFF Wallet is free). BUFF coins can be redeemed for virtual in-game items across various brands and platforms.

BUFF's decentralized gaming loyalty platform is a groundbreaking cryptoeconomy ecosystem based only on gamers' merits, in which gamers earn BUFF coins in direct correlation to their progress, achievements and time spent gaming, regardless of their hardware capabilities. Through its extensive network of corporations with different gaming platforms, BUFF hopes to enable holders of BUFF coins to purchase virtual goods across multiple gaming brands; trade with other holders and gamers on BUFF's wallet, which is based on blockchain technology for maximal security and transparency.



BUFF is using Blockchain technology to build our very own decentralized “mileage/token economy” for gamers across all games worldwide, fueled by our own issued cryptocurrency: the BUFF coin.

Gaming is a \$116B a year market (2017) with 2.5 billion users and an 10% YoY growth . The gamers and the gaming market value spreads between tens of thousands of small-medium-large brands, with a few mega-hits dominating the industry in terms of both number of active gamers and revenue from in-game purchase.

From “Clash Royale” to “FIFA”; from casual games to high-end quests, each has its own silo economy of points for achievements, rewards and in-game purchases. The problem, however, in our view, remains that gamers cannot generate, bank, or accumulate their efforts into something tangible, such as a standardized currency, usable across different games, platforms and exchanges.

We view games as an archipelago of different brands: each one being centralized, governed by its own one-sided rules, with currently no way to connect them in a fully decentralized manner and with as many wallets and “game currencies” as there are games in the industry.

BUFF aims to unite them and create the world's largest gaming economy, running on our decentralized cryptocurrency: the BUFF coin..

Now you know the “why”; this white paper will explain the who, what, when, where, and how.

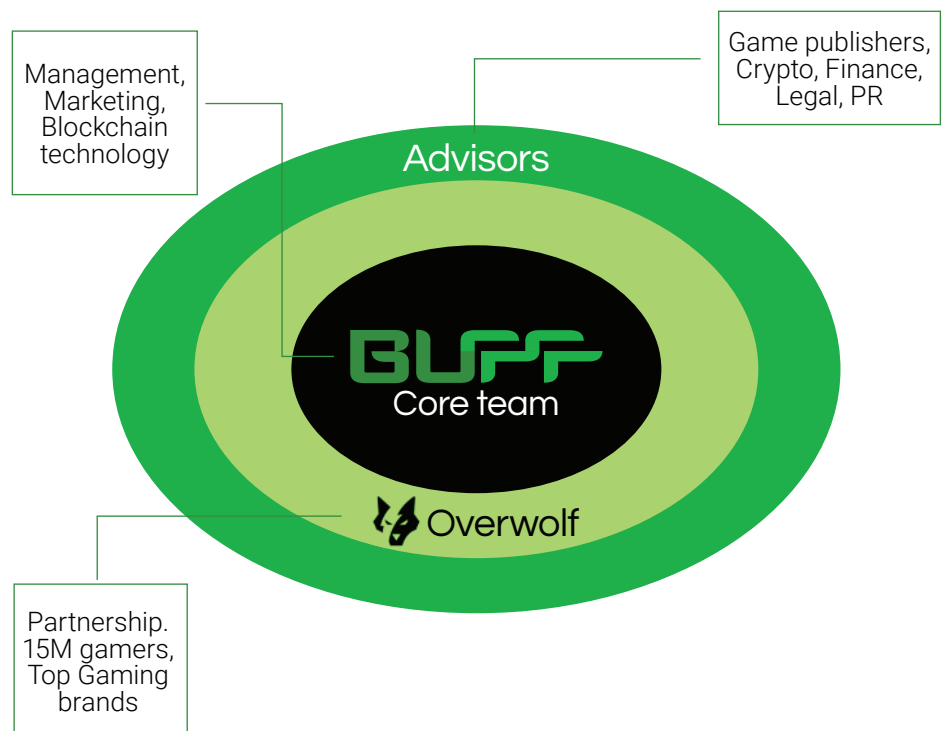


Meet team BUFF

The core team of BUFF is combined of experienced entrepreneurs from successful digital ventures, all with a proven track record of building global digital businesses from idea to reality, from startup to IPO. As you will note from the profiles set out further on in this white paper, our collective background is in gaming, fintech, blockchain technology, and online marketing. Our accumulative track record consists of onboarding and servicing users, commanding hundreds of millions of app downloads, generating tens of millions in revenue.

BUFF has teamed up with the experts behind Overwolf - a leading gaming platform responsible for the creation of numerous big-name titles within the industry. Overwolf's team of coders, designers, analysts and gamers form an integral part in building and distributing BUFF.

BUFF is all about striving to create a decentralized economy that empowers gamers and benefits all stakeholders. Our advisors help us shape this economy; we believe that it's a dream team of gaming and Blockchain enthusiasts..



This is us: Team BUFF and Overwolf

The Loyalty Industry

In the travel industry, a user typically uses different service providers throughout his or her journey; in response to this trend, several major alliances have been forged in the travel industry - from airlines and hotels, to car rental agencies and credit card companies, offering travel-related promotions.

In addition, many travelers often use airline-issued "regular money" (fiat) credit cards, creating a "mileage economy" estimated at billions of dollars ².

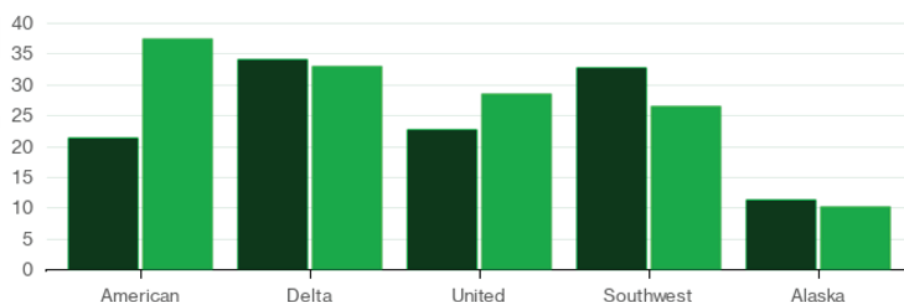
CEO of American Airlines Doug Parker said, **"We'd like to turn AAdvantage miles into Bitcoin so that everything that you buy is with AAdvantage miles"** ³.

According to Bloomberg, the frequent-flyer scheme business is almost double in size compared to the seats business ⁴.

Loyalty is a big business

The value of some airline mileage programs may surpass the core operation

■ Market Cap (B) ■ Estimated Loyalty Program Value (B)



Source: Stifel

Bloomberg

This is the travel industry's version of a "shared-wallet"; however, these are highly centralized economies.

Although BUFF is not in the travel industry, the effectiveness of this industry in creating value has inspired us to build a highly validated "power of alliance" service using Blockchain technology as the unification platform to bring all of these isolated games' ecosystems into one decentralized network - the "BUFF ecosystem".

A great alliance will add value and deliver a better user experience to each member of the BUFF community, whether gamers, game publishers, sponsors, or 3rd party platforms dealing with in-game digital assets, so everybody wins. The existing fragmented nature of gaming economies and the absence of the underlying Blockchain technology probably account for the absence of such a solution already - that is, until now.

2. <https://skift.com/2017/04/01/frequent-flyer-programs-profitability/>

3. <https://www.dallasnews.com/business/business/2017/10/27/frequent-flier-junkies-guy-thank-addiction>

4. <https://www.bloomberg.com/news/articles/2017-03-31/airlines-make-more-money-selling-miles-than-seats>



The BUFF logic is as follows:

A gamer joins the BUFF Loyalty Plan/ecosystem via mobile or desktop app - equivalent to an airline frequent-flyer programme sign-up; it's free, secure, anonymous and inclusive for all.

The initial onboarding will allow the BUFF platform to access the gamer's activity within each game. Thereafter, the system would track experience and achievements, add coins to a gamer's account the more the gamer plays, and allow the redemption of coins, as the balance permits, for various in-game digital items on the BUFF shop .

Once a gamer is onboarded onto the BUFF system, every action in any BUFFaligned game will seamlessly reward the gamer with BUFF coins.

Being a Blockchain platform -- decentralized, secure, transparent, distributed -- the exchange rates of all BUFF transactions in and out of games will be solely influenced by the community's demand and supply for the BUFF coin. As such - BUFF will have no way of setting prices or manipulating the ecosystem, as it will be truly transparent for the community.

The BUFF currency is a digital asset of the user which one can spend on ingame purchases .

As another facilitator of growth, we expect game developers will adopt BUFF as their game currency using our API as it

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One can go to the BUFF exchange marketplace and trade coins for virtual ingame items at whatever rate the market deems worthy within the ecosystem of BUFF . BUFF platform aims to set the scene and enable this virtual marketplace to prosper.

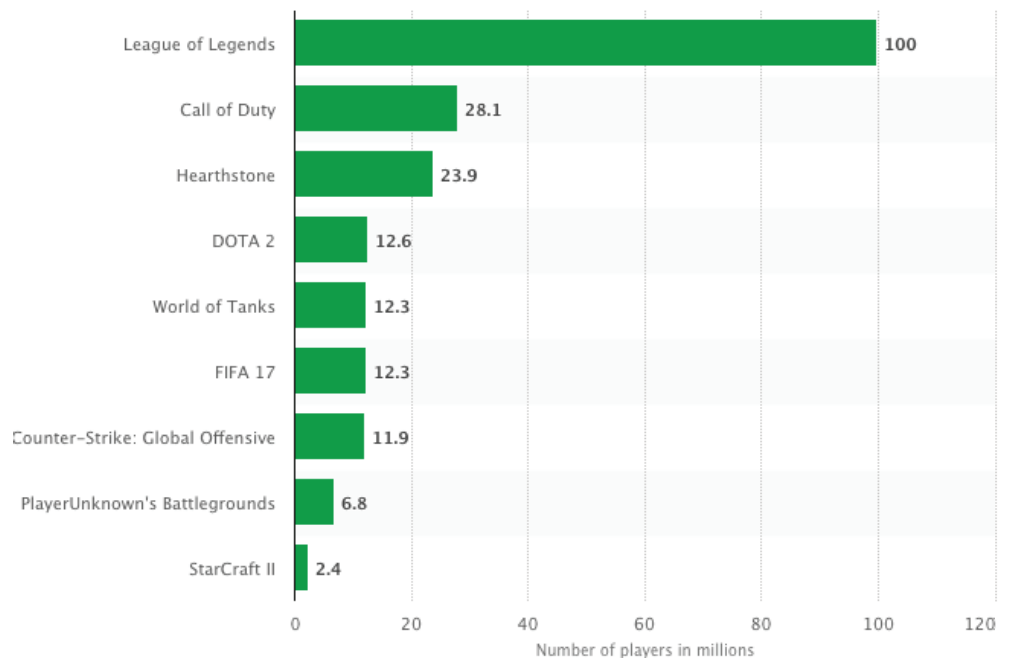
Though BUFF aims to charge a small fee from each BUFF transaction, we consider the real worth to be in the multi-functional utility of the coin among various games, this being a reflection of the BUFF community -- a loyal, engaged, active, growing community.

BUFF addresses a sizeable market with an established partner: Overwolf -- a leading gaming platform which seamlessly adds a plethora of gaming brands together with an initial install base of over 15 million monthly active gamers across desktop and mobile platforms. Among those supported games are over 700 leading game titles from major publishers



Millions of gamers use the Overwolf App Store routinely and download apps that up their game or enhance the playing experience. Harnessing Overwolf's reach and proprietary technology, BUFF hopes to be able to seamlessly access gamers' in-game economy statuses, history, and achievements in real-time – such capability being made available by BUFF upon launch. In this context, Overwolf also brings a network of relationships to the game-publishing industry, which serves BUFF as a marketing channel targeting gamers with the BUFF coin offering. Overwolf and BUFF teams work together as integral, supportive, and instrumental partners in building the BUFF platform.

BUFF MVP product is already live in Alpha stage with a version 1.0 released in May 2018. This version already supports major game economies from tier-1 publishers, with an emphasis on major eSports brands.



Number of players of selected eSports games worldwide as of August 2017 (in millions) 5

IMAGE	RANK	TITLE	TOTAL HOURS	ESPORTS HOURS	SHARE ESPORTS	CHANGE
	1	Counter-Strike: Global Offensive	69.6M	55.0M	79%	1 ▲
	2	League of Legends	88.9M	13.7M	15%	1 ▲
	3	Overwatch	32.5M	13.6M	42%	5 ▲
	4	Dota 2	30.9M	9.5M	31%	3 ▼
	5	Hearthstone	35.0M	5.3M	15%	1 ▼
	6	FIFA 18	10.3M	2.1M	20%	21 ▲
	7	Smite	4.2M	1.8M	42%	8 ▲
	8	StarCraft II	4.2M	1.6M	39%	1 ▼
	9	Call of Duty: WWII	4.7M	1.5M	32%	4 ▼
	10	Heroes of the Storm	5.8M	1.1M	19%	8 ▲

Most watched eSports hours on Twitch, January 2018 ⁶

5. <https://www.statista.com/statistics/506923/esports-games-number-players-global/>

6. <https://newzoo.com/insights/rankings/top-games-twitch-youtube/>



The Ecosystem: problems and solutions

The Gamers Overview

Games go far beyond entertainment. It's a culture that unites people everywhere regardless of language and territory, gender and age, wealth and education.

Everybody plays.

It's a deep and meaningful relationship with brands the likes of which no other industry boasts.

As part of this culture, gamers expect rewards for their brand attachment and to be able to utilize such value across various games and platforms.

The game's economies

Whether it's eSports, which centers around competitive teams, or games intended for individual gameplay, the vast majority of current-day conventional monetization of games is based on the in-game purchases of skins, mods, and unlocking of achievements.

When gamers pay for in-app purchases using fiat currency - "regular money", payments are split between publishers and distribution platforms.

For example, 82%⁷ of Apple's and Google's mobile app store revenues comes from games. The revenue run-rate of iOS and Android from games alone is estimated at \$12.5B per quarter (Q3 2017) ⁸.

Gamers spend hours unlocking achievements, which they can often later use to redeem virtual goods or trade with other gamers in exchange for in-game assets. In each of these cases, the gamers are hostage to the current monetization model and have no other way to finance in-game purchases.

BUFF aims to open up new opportunities for gamers to purchase in-game items by rewarding them with BUFF coins for their loyalty and time spent playing their favorite game titles and brands.

7. <https://techcrunch.com/2018/01/05/app-revenue-climbed-35-percent-to-60-billion-in-2017/>

8. <https://www.statista.com/statistics/661521/global-app-stores-mobile-games-revenue/>



BUFF plans to allocate coins based on gamers' skills, loyalty, time-spent, and number of achievements unlocked, with no dependency on gamers' hardware. Our vision is for BUFF coins to be used as a standard currency for purchasing virtual in-game products across game brands and platforms, and to be gifted between gamers to facilitate collaboration between them. BUFF would only be available for skilled-based games in order to provide fair play and will not support games of chance of any sort.

P2P interaction – our vision is for BUFF coin holders to redeem, trade, and gift their coins with others, as well as create clans/groups of users that would be rewarded coins individually via pre-determined smart contracts, factoring the aggregated stats of clan members.

Transparency - Community statistics, rankings, offers and rewards would be distributed in a public and secure way, utilizing the added values of a distributed system.

Fraud prevention – BUFF intends that the community monitors suspicious activities, bots, and cheats which would be handled through pre-agreed consensus nodes.

Interoperability - A loyalty program based on Blockchain technology can unite multiple siloed ecosystems (games) under one roof, using a standardized BUFF coin to make purchases of virtual in-game products across platforms and partake in community events.

The benefits to gamers

Earn cross-game coins while gaming, without the hassle of hardware dependency. A groundbreaking cryptocurrency allocation technology, which substantially benefits gamers by enabling them to leverage time spent gaming in order to accumulate BUFF coins.

We anticipate that the BUFF coins, as a standardized, widely-accepted gaming industry coin, will allow quick and safe trading of virtual in-game products across different game brands through a simple transaction at minimal fees.

Game publishers

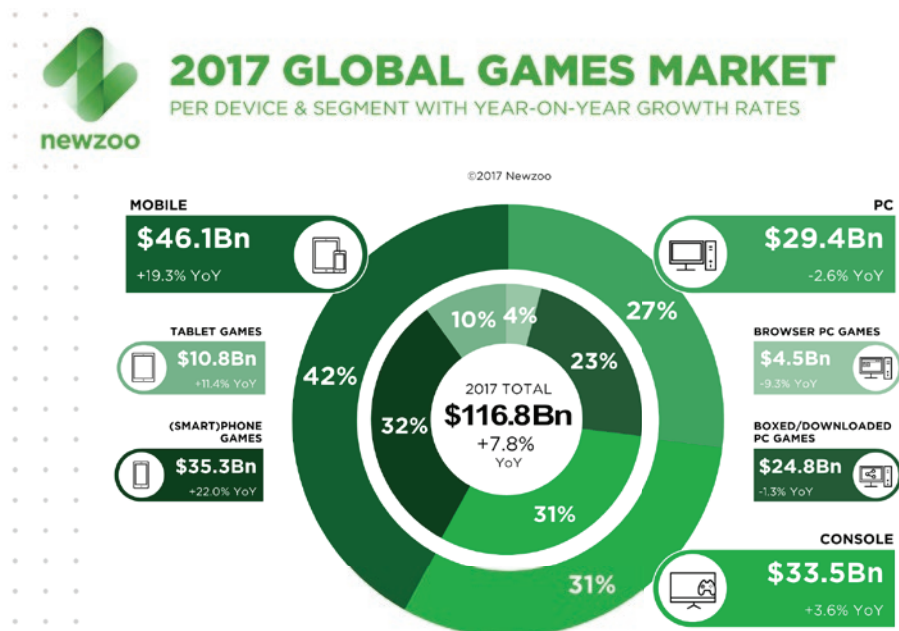
Overview

The gaming industry is among the most successful and rapidly expanding within the entertainment consumption sector ⁹. With 2.5 billion users, a market of over \$116B (2017), and an 10% YoY growth ¹⁰, the industry covers tens of thousands of brands in various sizes and reaches mass audiences across borders, platforms, and technologies

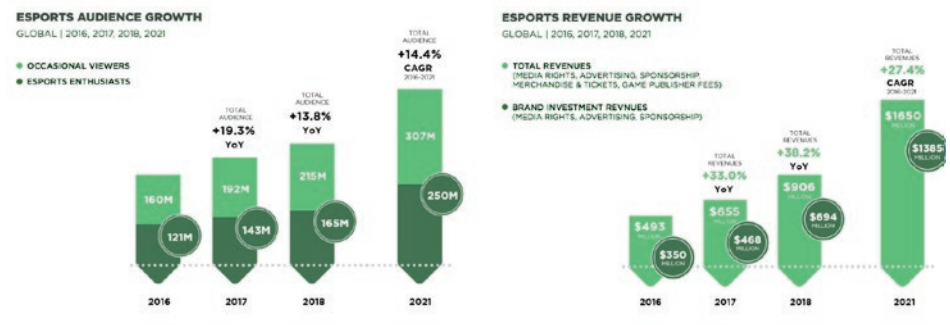
Although tens of thousands of game titles are available in the market, close to 1.4 billion users are actively participating in the top 10 titles alone, such as "Dota2", "League of Legends", and "Counter Strike".

9. <https://venturebeat.com/2016/06/08/the-u-s-and-global-game-industries-will-grow-a-healthy-amount-by-2020-pwc-forecasts/>

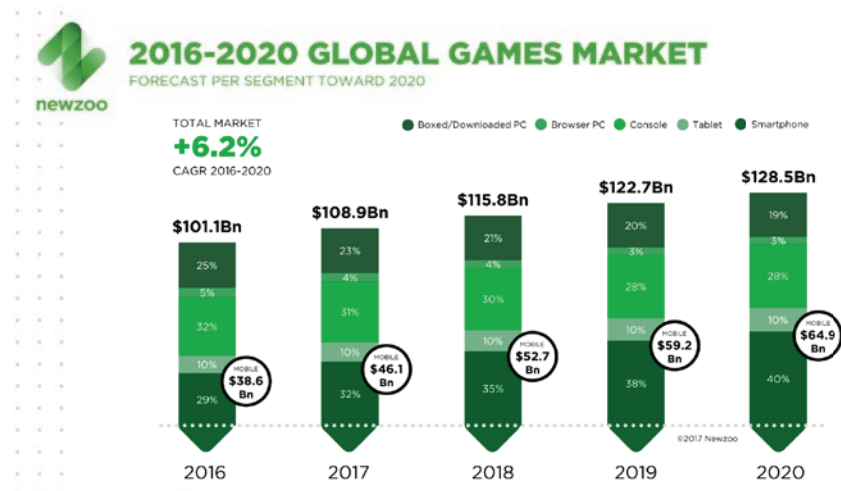
10. <https://newzoo.com/key-numbers/>



What started as a small tight-knit community in the early 1990's has transformed into a cross-culture, massive industry with a steady growth in these numbers both in previous years' statistics, and following years' forecasts. The gaming industry is competitive, results-driven, lucrative, mixing smart management strategies with evolving technologies and fresh, creative ideas. Such a dynamic industry attracts many companies, both international entertainment giants and small indie groups.



Although tens of thousands of game titles are available in the market, close to 1.4 billion users are actively participating in the top 10 titles alone, such as "Dota2", "League of Legends", and "Counter Strike".



Marketing and attrition (churn rate)

The publishers' cost side is often dominated by marketing and retention. Clearly their business is all about lowering marketing and retention costs while generating revenue mainly from in-game purchases. Therefore, we have identified that onboarding new users while reducing attrition and increasing in-game sales is a critical mission for games publishers.

Fraud and abuse

Publishers' management of game economies is like performing an open heart surgery: it's complex and risky.

Abuse and fraud can be huge risks. If one can "game the game", the publisher potentially faces significant losses¹¹.

The risk-reward motivational axis is complex and would be tied to the core of every game and gameplay, leading to the zeal of some gamers to try to gain an in-game advantage by committing fraud within games.

This is why every major platform should assume that it may be the target of criminal or fraudulent acts.

Our view is that this has resulted in a system where gaming economies are fenced in to fend off potential attacks such as hacking. Though often minor, such openings of a currency system expose the platform to security risks by which the entire game economy can be affected.

11. https://content.akamai.com/PG6836_onlinegamingtrendsandchallenges.html



The benefits to publishers

For game publishers, BUFF is a way to boost their business, onboard new users and reduce the churn of existing users, all in a secure and fraud-free platform.

As a cross-industry loyalty platform, BUFF allows game users to earn BUFF coins as they play and thus increases loyalty through a standardized, decentralized network.

Through its coin exchange, BUFF aims to bridge disconnected game publishers as well as provide a way for talented new publishers to reach new audiences.

Our view is that combining BUFF's algorithm with Blockchain technology will revolutionize the existing structure of interaction between publishers and their users, as it will enable a more direct, automated interaction between community members, as well as automated payments via smart contracts for more secure transactions at minimal fees.

Since gamers receive BUFF coins during gameplay, they are incentivized to spend more time gaming, which in turn means game publishers will benefit from longer exposure times to their brands, a gain which can be used for marketing purposes and increased brand awareness and loyalty.

A standardized industry currency will lead to closer cooperation between game publishers, which will generate more offerings to gamers.

We consider it possible for BUFF to be implemented on virtually any game, which would help new game publishers reach new mass audiences.

Publishers can reinvigorate their audiences by using BUFF as a retention mechanism - a way to re-engage gamers to return to a game due to their existing in-game scores and achievements.

Gamers trading in-game items using BUFF would create a new digital buy-sell market which could dictate the value of in-game items based on supply and demand, potentially leading to game publishers issuing new items (benefiting game publishers as well as gamers).

As a result, BUFF should increase average gaming times across the board, which should also lead to more interactivity between gamers across platforms, better interoperability between different game brands, and the launching of new rewards and offerings.



Blockchain as a way to eliminate fraud

These days, with Blockchain technology revolutionizing whole industries, the gaming industry is also experiencing many changes across its various segments. Including software development, hardware improvements, gaming, broadcasting, and interoperability improvements between platforms. Both for marketing affiliations and for cross-platform trading.

According to Deloitte's research¹² regarding customer loyalty rewards programs, Blockchain technology as a trustless, distributed ledger introduces a disruptive way to revitalize the existing structure of loyalty programs through its potential to streamline execution of the rewards in near-real-time and in a transparent, cost-effective way.

Establishing a loyalty program on Blockchain technology in the gaming industry will allow instantaneous creation of reward points that can be redeemed or exchanged in a fast, secure and transparent way across multiple platforms and between users and publishers - all through a trustless environment operating without intermediaries.

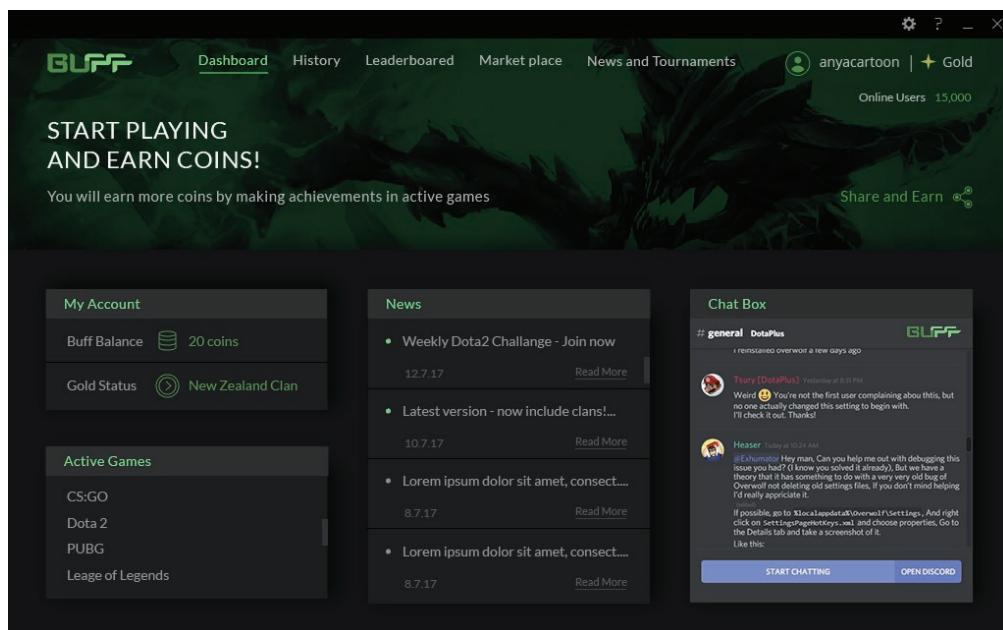
From a scale perspective, Blockchain-related services have already proven to be easily deployed and spread via social media and digital wallets, as well as autonomously interactive with various completing programs through selfexecuting smart contracts. Our view is that this leads to faster adoption by consumers, benefiting publishers as well as users of the program.

Using blockchain technology, BUFF's statistical analysis platform aims to locate and prevent fraud, and in case of disputes between parties, a Blockchain consensus mechanism would be set to arbitrate, as detailed in the following technical chapter.

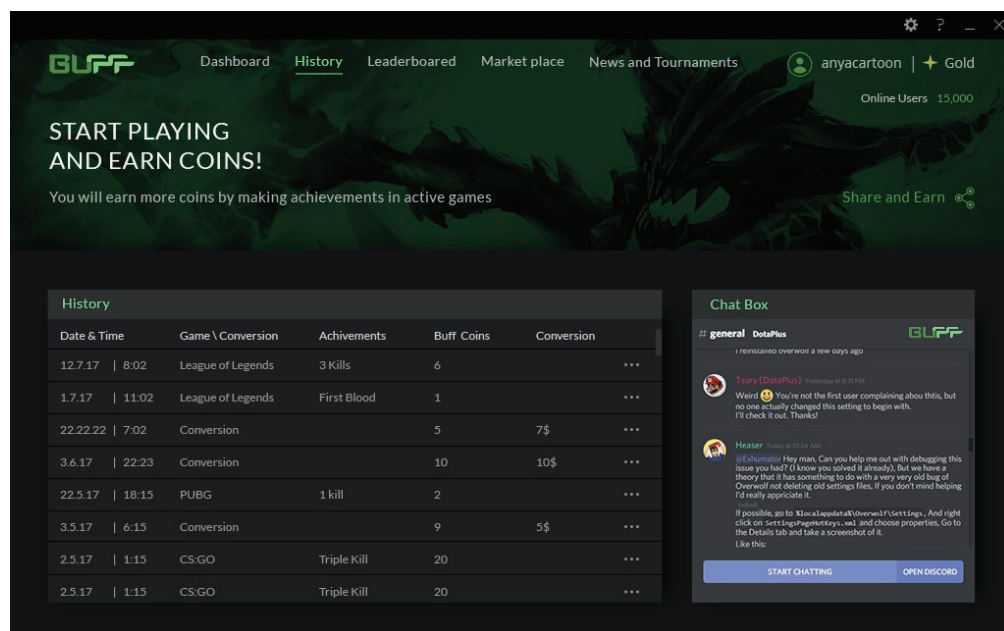
12. <https://www2.deloitte.com/us/en/pages/financial-services/articles/making-blockchain-realcustomer-loyalty-rewards-programs.html>

Key features of BUFF

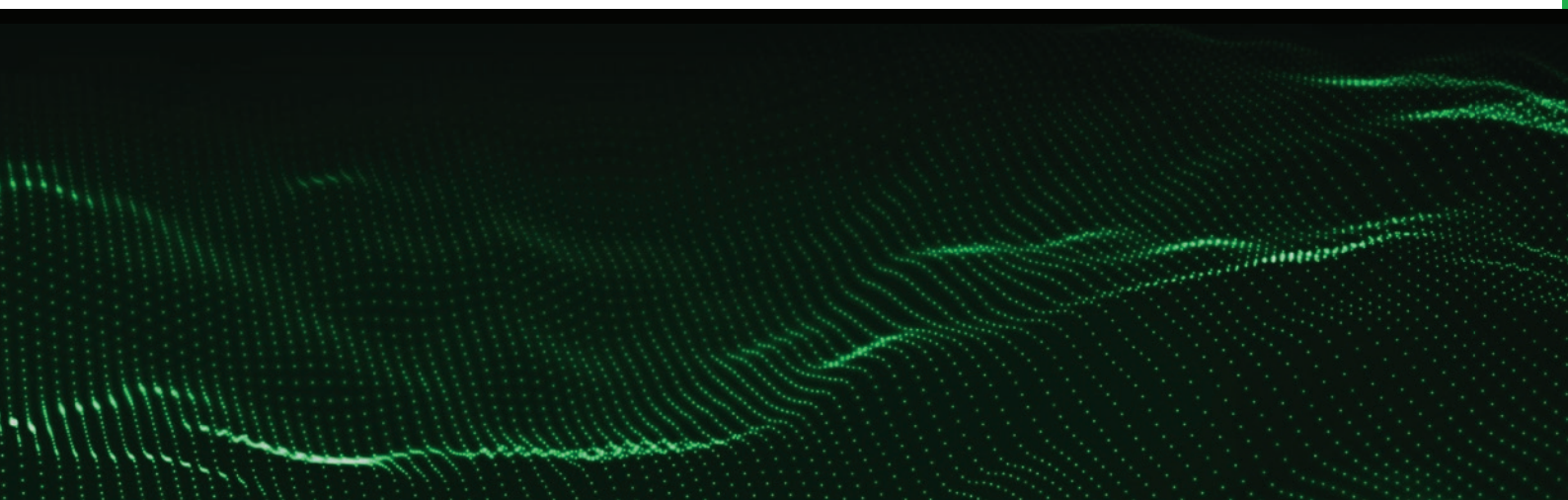
BUFF App Design

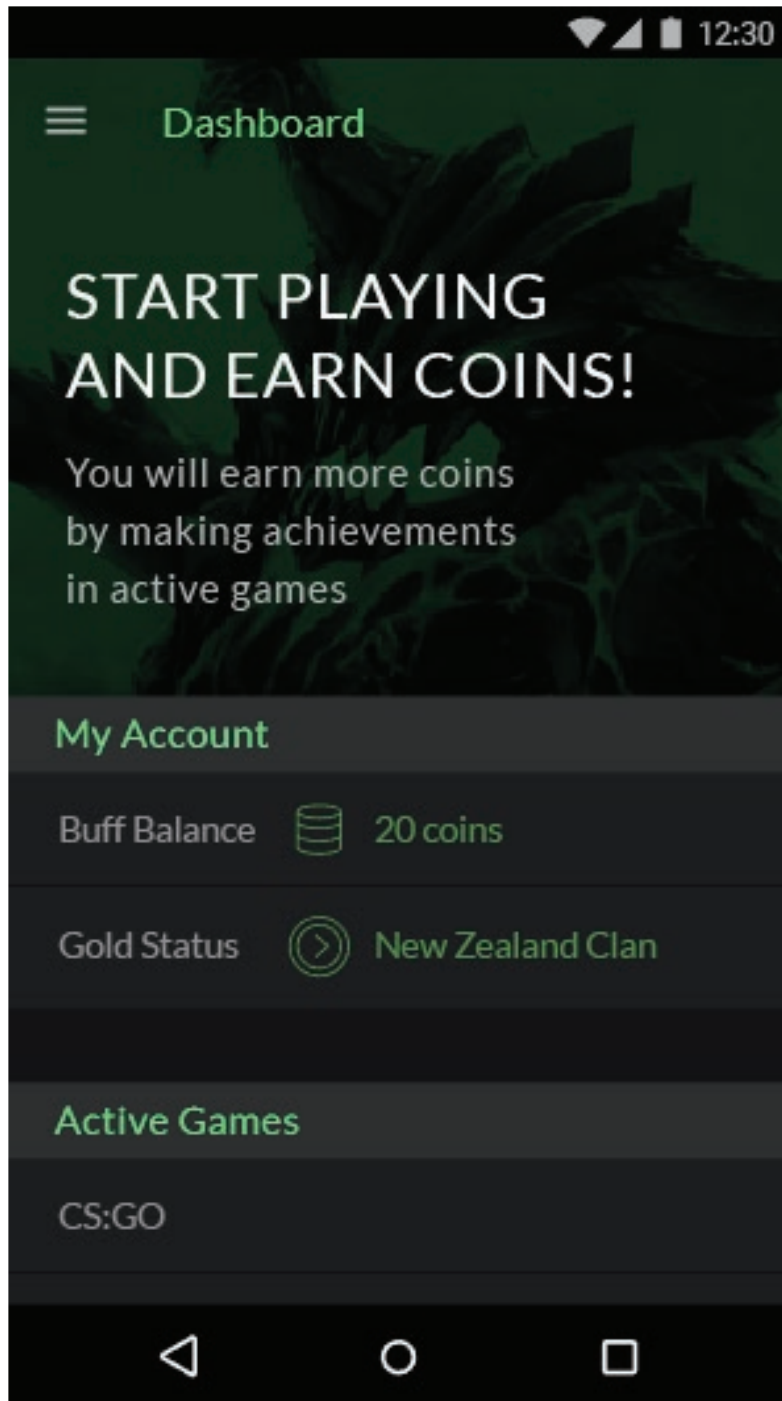


Main Dashboard screen- desktop

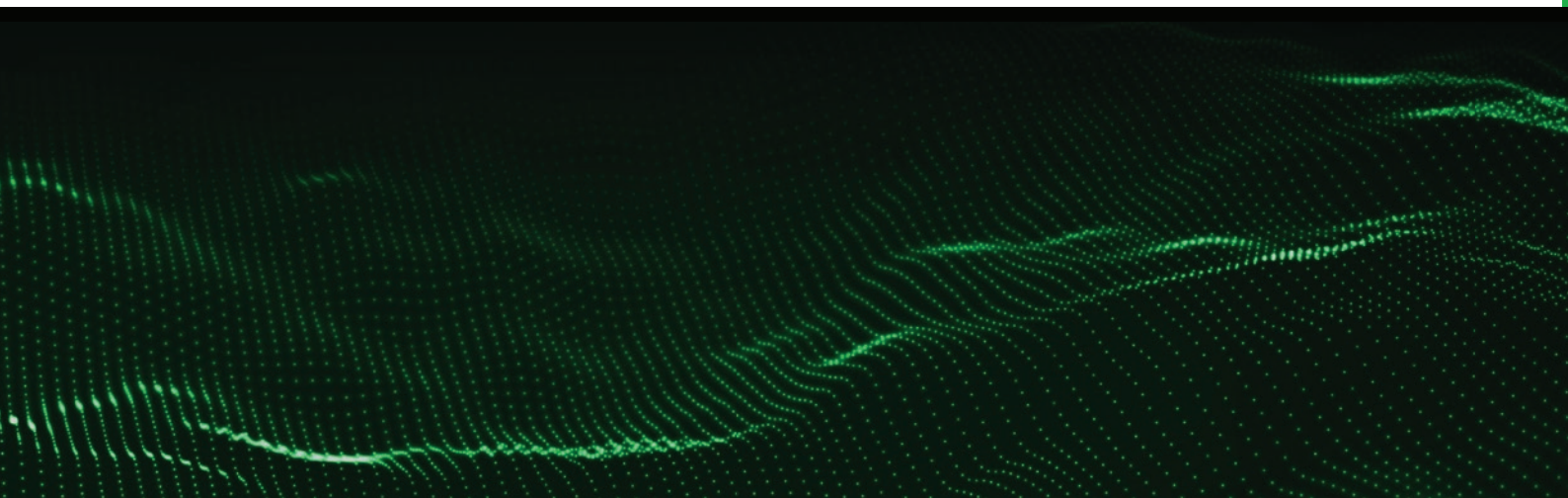


History screen- desktop





Home screen- mobile





Earning coins ("mining" with no hardware requirements)

Participants earn BUFF coins by playing their favorite games. The coin allocation process is performed in the background; therefore, it doesn't interfere with the gameplay or require any additional expenses (installing the BUFF Wallet is free). BUFF coins can be redeemed for virtual in-game items across various brands and platforms.



Easy add-on

The BUFF platform is a single-page web-app built in html and Java which can easily be applied as an overlying layer on countless games, generating a constant flow of coin allocation opportunities for gamers and exposure for game publishers.



P2P interaction

Holders of BUFF coins can trade them for virtual goods or create alliances with other gamers to earn larger quantities of BUFF coins, which can then be used to purchase higher value virtual goods.

"Virtual goods" refers to skins, mods, items, stars, achievement rewards, and various in-game coins - such as WolfCoin (which is redeemable via Overwolf for LoL, CS:GO skins & more), etc.



BUFF Status Tier

Our vision is that, as gamers gain more BUFF coins, they would automatically be upgraded to a higher membership status tier, which would be factored at a higher multiple in the BUFF coin's loyalty reward algorithm. For example, a high-tier BUFF member would earn 20% more coins than a lower-tier one, which in turn would incentivize gamers to improve their statistics



New way of unlocking new levels

Many gamers spend real money to unlock new levels - paying fiat currency to game publishers in exchange for increased progress in the game.

Instead, with BUFF, our aim is for gamers to use pre-earned BUFF coins to buy access to those same locked levels. BUFF, by design, would support multiple brands, so coins earned in one game could be used seamlessly to unlock new levels in another. This is what using a decentralized network is all about. No single person runs this economy or can limit or govern transactions.



Discounted virtual goods

The BUFF platform aims to use its community's purchasing power to buy items in bulk from game publishers at discounted prices, such items would then be available at a lower price to BUFF holders in the BUFF marketplace.



Secure payment transactions & fraud prevention

Our aim is for BUFF to be based on a distributed network which will lower transaction costs and increase protection from malicious users, fraud, bots, and cheats.

Harnessing the aggregated power of the community through a decentralized system would help automatically flag suspicious activity and abnormal statistics, which would then be subjected to consensus arbitration.



Self-sustaining

BUFF's revenue stream will be derived from transaction fees, affiliate models, gaming events' sponsorships, and margins on wholesale discounts for buying virtual goods from game publishers. The revenues from the platform's activity will be reverted and contributed back to the gaming community of the BUFF ecosystem to further its growth and influence across different gaming brands.



Community oriented

Our aim is for participants within the BUFF ecosystem to be able to leverage its interactive functions to tighten the community. These functions include: chat (using Discord app/interface), launching special events (such as league tournaments), creating clans with joint rewards, leaderboards with weekly prizes for top gamers, issuing challenges to other gamers, and more.



Technical implementation

BUFF aims to provide complete functionality within its ecosystem. To do this, BUFF would use publicly distributed protocols as the building blocks for the BUFF platform, which include:

- **Smart contracts** for managing transactions between BUFF participants, BUFF coin allocation
- **Ethereum.** BUFF tokens will be initially issued on Ethereum due to its reliability, well-documented capabilities and maintenance by the community.
- **Buff blockchain.** BUFF network requires thousands of tps. There is no platform where such a solution is possible, so we aim to develop BUFF blockchain using frameworks

Smart contracts & Public API

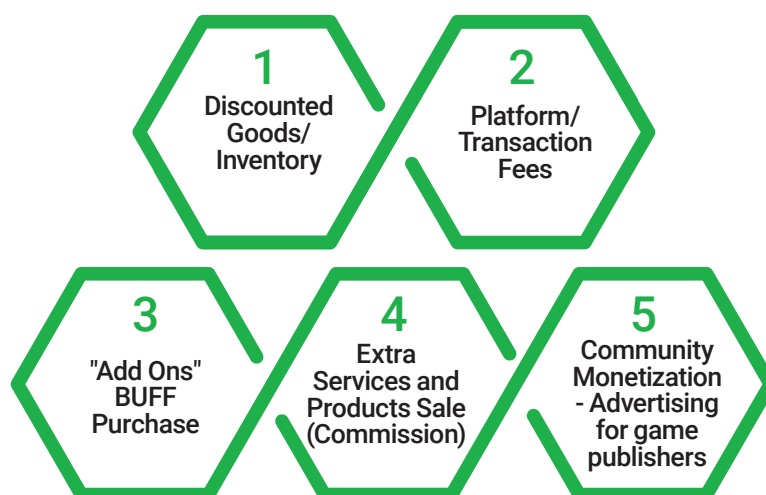
As part of establishing BUFF on Ethereum, the Ethereum token standard ERC20 has been identified for this project. As the currently most widely supported smart contract blockchain, with a massive development community, our view is that Ethereum is the optimal choice for launching the first stage of the BUFF ecosystem.

We anticipate that the usage of smart contracts within the BUFF ecosystem will enable a transparent mechanism of awarding loyalty rewards to gamers in a trustless way, as well as add a layer of security for preventing in-game fraud.

Sustainability & Growth

The BUFF ecosystem aims to enable a truly revolutionary way of earning BUFF coins without the need to invest in hardware and without consuming additional resources, other than those already consumed during gaming time

Revenue sources to be injected back into the BUFF platform:





In addition, revenue which may be generated within the BUFF ecosystem (through discounted items' purchase, item trading and currency exchanges) would be invested back into the platform in order to expand its reach and maintain its scalability, adding another incentive for participants in the ecosystem to contribute to its growth and sustainability.

To summarize, because the BUFF coin is essential for using the functions of the ecosystem and because it is awarded to participants for their loyalty in games, as the demand increases, our aim is for more funds to be invested into the ecosystem, consequently propelling its sustainability.

Catapulting via Overwolf

BUFF has decided to join forces with Overwolf, a world-leading provider of open software platforms for mobile and desktop gaming apps, as a major strategic partner in the gaming industry. The available apps from Overwolf are single-page web applications (HTML5 and JS) powered by an engine (C++). These applications are found across multiple platforms and can be added as an unobtrusive over-layer on top of existing games. Overwolf's apps offer competitive stats, video capture, guides and more, and are focused on helping gamers win by understanding game events (such as "kills", "achievements", etc.) in real-time.

Overwolf has more than 300 apps in its free appstore, a huge gaming community with over 15 million users, and many well-known organizations that chose to develop overtop Overwolf, including top eSports teams (e.g. Cloud9, CLG, Team Liquid), gaming startups (e.g. Firstblood, Mobalytics) and large corporations (e.g. Alienware, Logitech).

Overwolf's advanced technology for capturing in-game activities provides BUFF with the ability to gain real-time gaming statistics, analyze them through BUFF's protocol, and reward the gamers with BUFF coins based on the gamers' tiers and gaming quality scores.

From a technical aspect, Overwolf's JavaScript-based SDK, API and plugins allow third-party developers to easily publish apps with a worldwide reach to gamers.

Overwolf aims to also provide valuable commercial and marketing support to the BUFF app through its distribution channels and massive community, opening direct channels to top game publishers worldwide, which would increase the number of offerings on the BUFF platform and help secure digital items at discounted costs for the benefit of BUFF coin holders.

Overwolf intends to be the first partner to be fully integrated into the BUFF loyalty program, as Overwolf. This would enable holders of BUFF coin to redeem their coins for WolfCoins, usable across all games hosted on Overwolf's app store. The agreement between BUFF and Overwolf lists success-based milestones that trigger compensation by means of cash and/or BUFF tokens.





The BUFF economy

We anticipate that the economy within the BUFF ecosystem will be driven by these main groups:

1. **Gamers** who earn BUFF coins that can be redeemed for digital items, gifted between users.
2. **Game asset traders** who gain access to a trading platform and an entity that will buy digital items in large quantities.
3. **Game publishers/developers** that get exposure to their brands and higher volumes of in-app purchases through BUFF's coin, store and app.
4. **Legacy sponsors** looking to promote their brands within the booming gamer community.

The proposed allocation of BUFF coins as a loyalty reward for gamers is calculated based on data collected from two case study games: "Dota 2" and "League of Legends". The aim is to have a mechanism of coin distribution which normalizes the following parameters: account data, game data, match data, data between games and between matches, and corresponding tier data. The tables below showing rewards per block are only used for testing statistical approaches in order to better demonstrate meta parameters on a macro level. There will be no strict reward per block, since the allocation model does not reflect direct mining.

In addition, given that certain rewards may depend on different variables (such as a game or a match), the list below of statistical features which can be extracted based on Overwolf's technology is temporary, and after the MVP phase, the events' extractors should be fine-tuned and finalized. Skill-based game events, which require intuition, game understanding, experience, and tactical foresight, should also require factoring. "Dota 2" reached extensive Machine Learning capabilities, which are able to estimate these types of games skills, and the related API will be used by BUFF as a markup for the dataset.

Based on the chosen case study games, the following calculations are proposed to be used as the basis for reward logic responsible for the allocation of the BUFF coin to gamers.

We need to normalize and maximize the reward function. We aim to define the initial reward using five steps

1. Feature selection for games
2. Feature selection for matches
3. Feature-Reward distribution for matches
4. Feature-Reward distribution for games
5. Reward maximization for corresponding Tiers

An abstract digital background featuring a series of bright green, wavy, horizontal lines that resemble a stylized horizon or a signal waveform. These lines are composed of numerous small, closely spaced dots or pixels. The background is a solid black, creating a high-contrast, futuristic aesthetic. The lines curve and ripple across the frame, giving a sense of motion and depth.

An abstract digital background featuring a series of bright green, wavy, parallel lines that create a sense of depth and movement. These lines are composed of numerous small, glowing green dots or particles. The entire composition is set against a solid black background, which makes the vibrant green elements stand out prominently. The lines curve and ripple across the frame, giving the impression of a dynamic, fluid surface or perhaps a stylized representation of sound waves or data flow.

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League of Legends

Indicators Game		Indicators Account		Indicators Match					
Quantity Games	int	ID	long	Indicators Match		Indicators Player		Team Indicators	
24h Volume Games	int	Champion	str						
Players Total Quantity	int	Name	str	Mode Game	Classic	Champion	str	ID Team	int
Players Active	int	Region	str	Teams	str	Gold	int		
Type Game	int	Game (League)Rank	int	Kills	int	Minion Kills	int		
				Double Kills	int	Neutral Minion Kills	int		
				Triple Kills	int	Level	int		
				QuadraKills	int	Kills	int		
				PentaKills	int	Quadra Kills	int		
				Deaths	int	Triple Kills	int		
						Penta Kills	int		
						Assist	int		

Feature-Reward distribution for match. Distribution’s calculation based on corresponding features importance and actual games results (for game results, a weight of 45% match reward was given). Inner features distribution was defined by using Generative Adversarial Network (GAN), where Win probability was defined by aggregated team indicators (which are distributed between team members). GAN was used in order to understand how to generate game results and flow. For the non-technical reader – GAN is a class of artificial intelligence algorithms using machine learning to solve problems. Based on GAN experminents, the below tables were produced.

Inner Match Dota 2 Rewards Distribution

(100%) Reward											
GPM		XPM		KDA		Hits Last		Denies		Victory	
15%		15%		15%		5%		5%		45%	
+551	15%	+551	15%	+4	15%	+250	5%	+70	5%	yes	45%
550 - 501	13%	550 - 501	13%	3.9 - 3.7	13%	250 - 225	5%	70 - 60	5%	no	0%
500 - 451	10%	500 - 451	10%	3.7 - 3.5	11%	225 - 200	4%	60 - 50	4%		
450 - 401	8%	450 - 401	8%	3.4 - 3.2	8%	200 - 175	4%	50 - 40	4%		
400 - 351	7%	400 - 351	7%	3.1 - 2.9	4%	175 - 150	3%	40 - 30	3%		
350 - 301	6%	350 - 301	6%	2.8 - 2.6	3%	150 - 125	3%	30 - 20	3%		
300 - 250	4%	300 - 250	4%	2.5 - 1.5	2%	125 - 100	2%	20 - 10	2%		
0-250	0%	0-250	0%	1.5 - 0	0%	100 - 0	0%	10 - 0	0%		

Inner Match LoL Rewards Distribution

(100%) Reward									
Gold		KDA		Kills Minion		Level		Victory	
15%		15%		15%		10%		45%	
+15000	15%	+4	15%	+300	15%	18	10%	yes	45%
14999 - 12001	13%	3.9 - 3.7	13%	275 - 251	13%	16-17	9%	no	0%
12000 - 10001	10%	3.7 - 3.5	10%	250 - 226	10%	15	8%		
10000 - 8001	8%	3.4 - 3.2	8%	225 - 201	8%	14	7%		
8000 - 6001	7%	3.1 - 2.9	7%	200 - 176	7%	13	6%		
6000 - 4001	6%	2.8 - 2.6	6%	175 - 151	6%	12	5%		
4000 - 3000	4%	2.5 - 1.5	4%	150 - 125	4%	11	4%		
2999 - 0	0%	1.5 - 0	0%	124 - 0	0%	10 - 0	0%		

Feature-Reward distribution for games. For such task we don't have sufficient data in order to to it quantitatively. So we need to use some analytical approach. For the first MVP we have chosen very similar games Dota 2 and LoL. Both of them have similar complexity, so for these games maximum of reward will be based on average match time. Because LoL players playing matches faster than Dota 2 players.

Reward maximization for corresponding Tiers. With regard to Tier bonus calculation, corresponding updates to the protocol and recalculations of distribution will be made within fixed time intervals in order to keep the system adjusted to progress and changes in the gaming industry. It is proposed that tier levels are calculated based on gamers' gaming experience, time spent gaming and rewards gained or redeemed. Having an initial price \$0.5 per token we want to create an environment which will give next incentive for gamers.

tiers User	daily/playtime Avg	week/Spend	Proportion	/incentive Desired week	Reward distribution
Bronze	0-30	1<	90.00%	1.00\$	23.08%
Silver	30-60	5-10	8.00%	5.00\$	51.28%
Gold	+60	+10	2.00%	10.00\$	25.64%



We plan to define the Reward Protocol in order it to feet our plans to reward gamers at least in the next 20 years. We will statistically control the rewards in order to feet total supply. Initial form of reward will be defined as:

$$\sum_p^n r_p = \mathcal{R}$$

- \mathcal{R} - total system reward in tokens per week
- \mathcal{P} - player
- n - total number of players in the system
- r_p total player reward in tokens per week

r_p will be defined as:

$$\sum_i c_i \log \frac{\sum_m t_{im}}{q_i} = r_p$$

- i - game
- c_i - complexity of -th game
- m - match
- t_{im} - time spent for -th game in -th match
- q_i - quantity of match per week in -th game

We are not listing all the limitations such as $\sum_i \sum_m t_{im} \leq 168 \text{ hours}$ because they are obvious and will be taken into account by analytics service in order to prevent fraud.



Architecture

BUFF plans to be organized into two networks: 1) a Blockchain network for rewards allocation, which will be a custom-developed BUFF Blockchain, and 2) a public Blockchain network based on Ethereum or equivalent network to be used for recording transactions. The aim is for different class tier nodes to be operating under delegated proof of stake, and the system itself consisting of 5 parts serving as its base structure:

BUFF DApp with peer-to-peer capabilities

This part aims to allow messaging, in-game data collection, and 2nd validation of statistics upon requirement with the P2P network containing 3 different class levels of P2P nodes, by which computations are processed

BUFF blockchain for rewards allocation

Rewards would be allocated in accordance with gamers' tier class level. The three different tier classes are corresponding between the BUFF DApp and the BUFF Blockchain networks.

Public blockchain for transactions

Processing general transactions related to trading, game purchases, connections to exchanges, etc.

BUFF Analytics Service

Contains the algorithms for aggregated game results analysis. This part plans to include dynamic AI-based updates of protocol to flag and protect from potential fraud..

BUFF arbitration and support

Arbitration of flagged cases; integration of new game Oracles; support and GameDev requests would be processed here, based on data from BUFF Analytics Service and assisted by BUFF's technical support team

Process Flow

Registration and tier assignment

To participate in the BUFF rewards program, our vision is for gamers to download the BUFF app (initially through the Overwolf Appstore), register their accounts to get a private-public key pair, and then proceed to play their favorite games.

We propose that gamers would be assigned a BUFF Tier 1 status as the default, and in accordance with their gaming score progress, their BUFF Tier statuses would be upgraded. The more a gamer progresses and unlocks achievements in games embedded with BUFF, and the more the gamer is involved and contributes to the community, the higher the tier status would rise.

Gamers' tier levels would affect two aspects:

1. The higher the membership tier, the more BUFF coins a gamer would receive.
2. The higher the membership tier, the more consensus permissions would be associated with the gamer's node for arbitrations.



Background process

Game start

We intend that, upon game initiation, data processing and transactions will be executed in correspondence with the gamer's membership tier node and sent to the BUFF Blockchain. The three membership tier nodes vary in capabilities and permissions and serve together in a synergistic manner.

Tier 1 nodes:

"Basic level" membership tier that gathers and provides data on on-going games as well as statistics of previous games, which are backed by captured screenshots and videos. Data from Tier 1 nodes are transmitted to the mempool, where the data is held until a higher level node picks them up and includes them in the next block post-validation.

Tier 2 nodes:

This membership tier class has the same basic permissions as Tier 1; however, it is also used for additional realtime and end-game checks. In addition, Tier 2 nodes may be used as proxies providing additional computing power for the BUFF Analytics Service. For the additional game checking process, Tier 2 nodes will be required to install a virtual machine with provisioned software, for which they will be entitled to receive bonus BUFF coins as reward.

Tier 3 nodes:

Having the same permissions and functionalities as Tier 2 nodes, the Tier 3 nodes are responsible for block creation and are part of the BUFF Blockchain consensus. As such, Tier 3 nodes are required to be full nodes, as they confirm transactions, award BUFF coins, and write the blocks.

Game ends

Upon game completion, a corresponding transaction is sent to the BUFF Blockchain network. Both transactions sent upon game start and game end contain all data related to the game, player, team, and match.

BUFF coin allocation

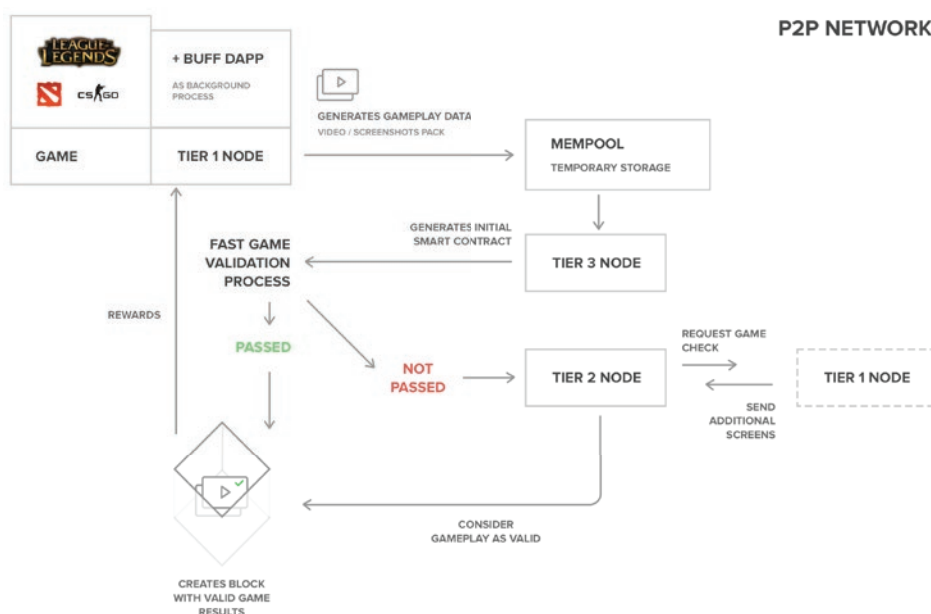
Upon validation of data supplied in the previous steps, Tier 3 nodes will continue to reward BUFF coins as loyalty rewards. The validation is based on algorithmic checks intended to prevent fraud.

Validation process:

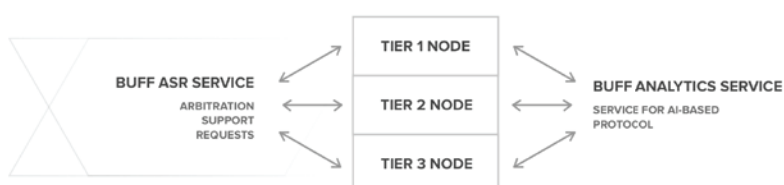
- If data provided regarding gameplay passes the algorithmic check, the BUFF coins are awarded to the gamer.
- If data doesn't pass the algorithmic check and data results are out of range of possible parameters, such as the results are out of bounds of the statistical deviation or the recorded activity indicates improbable physical activity - including clicks and actions taken per minute -, the player will receive a ban. It is envisaged that if the player wishes to dispute the ban, the case would be reviewed by the BUFF Arbitration Service and decided accordingly.
- If data doesn't pass the algorithmic check, but it is in the range of possible parameters, a secondary assessment of the data can be performed using a set of Tier 2 and Tier 3 nodes, referenced for this purpose as "Elected Witnesses"..

Secondary assessment process

During this process, the Elected Witnesses nodes will sign on to a smart contract and ask for additional data through the P2P network, including screenshots or highlighted videos, regarding the gamer in question. The Elected Witnesses nodes will be provisioned with AI-based computer vision algorithms to perform more in-depth analysis of the data. After data are checked, the nodes will vote on the accumulated game results, and pending the results of the vote, the decision to either ban a gamer or allocate coins will be made.



P2P NODES CONNECTION





Support and GameDev Requests

BUFF is working with different game publishers and will also utilize the community to reach more and more game publishers in order to add new games. Independent game publishers are welcome to join BUFF by simply signing up. BUFF team and community will analyze and vet each request.

General requests made by users related to the wallet, exchanges, UX/UI problems, and/or the marketplace will be addressed by BUFF's team and community members.

BUFF Analytics Service

The BUFF Analytics Service is the core AI of the ecosystem and will be established as the genesis node (account) of the BUFF Blockchain. This node will trigger protocol updates based on aggregated and analyzed data and will be responsible for data aggregation via the P2P network. Using the results of the analyzed data, the AI at the core of this node will learn to identify various instances of possible fraud and will verify that the rewards system is up to date across the board, including game updates and players' various gaming styles. It will use machine learning to create different analytical models and improved coin rewarding mechanisms.

Advanced Anomaly Detection

The BUFF Analytics Service will employ an ensemble of models created to detect anomalies (cheaters and frauds) within the ecosystem. Nowadays, anomaly detection models have been successfully applied in many real world situations, such as fraud detection for credit cards and intrusion detection in security; however, there are only a few empirical studies regarding using anomaly detection techniques for the purpose of detecting cheating in online games, and these conducted studies are lacking in sufficient data.

BUFF will use the robust in-game data statistics gathered by Overwolf to create a solid algorithm for detecting cheaters. Two experiments were already conducted using Overwolf's dataset on two real online games ("Dota 2" and "League Of Legends") and the research is progressing, including testing a Distributed Hash Table (DHT) with storage to counter professional cheaters and frauds.

Proof of Play (BUFF Blockchain consensus)

Consensus will be reached using a customized DPOS (Delegated Proof of Stake) algorithm, involving Tier 3 nodes with BUFF Analytics Service as a genesis account.

Such a consensus model was used in BitShares and EOS, and it is the only form of consensus capable of scaling to millions of transactions per second. As a case study, a calculation based on external values of the daily 50 million gamers in "League of Legends" and 30 million in "Dota 2" shows that the ecosystem should be able to support the performance of 3,000 transactions per second, which, as stated above, is currently only supported by employing DPOS as a consensus

algorithm. In addition, problems such as Double Spend Attack, Transactions as Proof of Stake, and Blockchain Reorganizations have already been resolved by BitShares through DPOS, and would be implemented in BUFF as well.

The Proof of Play model aims to ensure that the process is robustly secure against possible attackers wishing to manipulate the network in order to gain the ability to unilaterally interfere with transactions, either by taking control of the network or by exploiting a temporary inconsistency in the DB state on different computers.

Reaching a consensus

The main 5 questions to be answered by any consensus process are:

1. **Who** should produce the next block of updates to be added to the DB?
2. **When** should the next block be produced?
3. **What** transactions should be included in the block?
4. **How** should changes to the protocol be applied?
5. **How** should conflicting transactions' histories be resolved?

Block production by elected witnesses

The term "witness" was chosen for this purpose as it is a legally neutral word. Traditional contracts are often signed by witnesses as validation, yet the witnesses are not regulated as a party to the contract. As such, the importance of witnesses is to certify that a contract was signed by certain entities in a specific time. This role will be filled by chosen Tier 3 nodes that will act as witnesses by certifying signatures and timestamping transactions included into blocks, whereas a "block" refers to a group of transactions which update the state of the database.

Under the model of DPOS, stakeholders' accounts can elect any number of witnesses to generate blocks. Each one of the accounts is permitted one vote per share per witness, a process commonly known as "approval voting".

The witnesses that received the highest number of approval votes are selected. The number of witnesses (N) selected is defined in such a way that at least 50% of the voting stakeholders believe it will provide adequate decentralization. Once the number of required witnesses is agreed upon, stakeholders must vote for at least that pre-agreed number of witnesses.

The proposed number of witnesses is 21, which has proved to be sufficient in achieving consensus. To counter a drop in witness participation, a backup queue of inactive witnesses can be maintained on standby to replace active witnesses that have withdrawn.

Backup witnesses will also be incentivized to stay in the queue, for example, an inactive witness will produce 1 block at random by an inactive, and in exchange will be awarded with the block. This will preserve block times and will not compromise the security of the network.

Adding blocks

Simple transactions which pass the first algorithmic check, and thus don't require further file validation, will be completed by Tier 3 nodes; these are responsible for all block production tasks. In case the first algorithmic check fails, new nodes will be selected according to the same rules to perform a more detailed check.

Witnesses are paid for their services every time they produce a block, and their payment rate is set by the stakeholders via elected delegates. If a witness fails to produce a block, the payment will not be processed and the node might be voted out in the future.

The state of a witness (active/non-active) is updated once every maintenance interval, when votes are tallied. Witnesses are shuffled and given a turn to produce a block at a fixed schedule of one block every 3 seconds. Once all witnesses complete their turn, the accounts are reshuffled. In the event that a witness does not produce a block within its given time slot, the slot will be skipped and the next block will be produced by the next witness.

The network's health and witness participation rate can be monitored by anyone. In case the witness participation rate drops below a previously agreed threshold, users of the network can allow more time for transaction confirmations and monitor the network's connectivity.

Parameter changes by elected delegates

Delegates are elected in a manner which is similar to appointing witnesses. A delegate becomes a co-signer on a special account that has the privilege of proposing changes to the network's parameters. This account is referred to as the Genesis Account. In the BUFF ecosystem, the Genesis Account will be the BUFF Analytics Service.

The Genesis Account can perform any action that any other account can perform; it can be used as a trusted escrow account capable of receiving and releasing funds, and can issue new assets.

Parameters of the network can include block sizes, witness payments, transaction fees, block intervals, etc. Once the majority of delegates approve a proposed change to the parameters, the stakeholders are granted a 2-week review period, during which time they are also entitled to vote out delegates and to nullify proposals.

General community suggestions will be available via the BUFF App as a place for suggestions and voting on protocol improvements and updates. Note that every single BUFF member – even coinless - can vote.

Network updates and changes to the rules under DPOS

New features and games added will require upgrading to the network. Under a DPOS model, all such changes must be triggered by active stakeholders' approval. Under this logic, the following considerations will be taken into account:

Threshold

Changing the rules is dependent on all participants of the network upgrading their software and there is no Blockchain level protocol that has the ability to force how rules are changed.

While hard-forking bug-fixes can be performed without requiring a vote by the stakeholders, security-critical hard-forks will depend on stakeholders' approval, even for minor procedures. Such changes will be approved by the BUFF Analytics Service as a main stakeholder.

Witnesses

Witnesses are selected based on their commitment to remain neutral to the Blockchain policy. While theoretically possible for witnesses to collude and change their software unilaterally, thus changing the nature of the network, doing so is not in their best interest, as remaining neutral provides witnesses with the credibility of not being part of a centralized system and protects them from allegations that they are the administrators/operators of the network.

Developers

Developers may contribute and implement changes to the system as long as the changes are consistent with the approval of the stakeholders. This policy protects the developers and the stakeholders, as it ensures no one individual can dictate the direction of the network.

Market Landscape

Competitive analysis

Due to the massive size of the gaming industry, its expansion into new territories and rising trajectory, the industry is attracting many innovative Blockchainrelated ventures; however, BUFF is the only venture aiming to establish a global industry loyalty program for gaming that will use one standard coin which will be awarded to users

Listed below are several Blockchain related projects which address different niches within the gaming industry. Since BUFF will establish a global gaming loyalty platform, the more they succeed, the better the industry climate for BUFF.

WAX (was.io | Raised : 46M)

A decentralized marketplace aimed at allowing gamers to trade their digital assets on a peer-to-peer basis. The platform plans to enable traders to create their own virtual stores on a decentralized platform which will provide instant payments. In short, like eBay for gamers.

ENJIN (enjincoin.io | Raised: \$35M)

Enjin is a website content management system (CMS) for the gaming community. Its issued coin (ENJ) aims to give game developers, content creators and gaming communities the currency and tools for implementing and managing virtual goods. The ENJ coin will be at the core of ENJIN's planned framework of open-source software development kits (SDKs), wallets, game plugins, virtual item management apps and a payment gateway platform that will support their ecosystem. In short, it's like Wordpress (service for publishers, not for gamers).

FLIP (gameflip.com | Raised : \$15M)

A decentralized ecosystem where digital goods from different gaming platforms – mobile, PC, console, and VR/AR – can be sold as liquid assets using trustless smart contracts executed on blockchain technology. The digital goods transactions will be based on an issued crypto-token called "FLIP". In short, close to WAX.

Robot Cache (robotcache.com)

A decentralized video game distribution and resale platform based on blockchain technology, that enables gamers to resell their used games in a digital fashion. In addition, gamers can assign their computing power and hardware to the core of the platform in order to mine its coin (called "IRON") in a shared mining effort. In short, craigslist for used games (2nd hand).

While these ventures put a focus on harnessing blockchain technology in order to improve tradability of items between platforms and earn valuable coins, none constitute a competition to BUFF, as none offers a method of earning cryptocurrency purely based on the gaming experience and in-game progress of gamers, without losing any computing power or assigning hardware resources to external platforms.



Main challenges

The main challenges facing the BUFF platform:

Establishing a non-intrusive yet accurate method of monitoring gamers' performance.

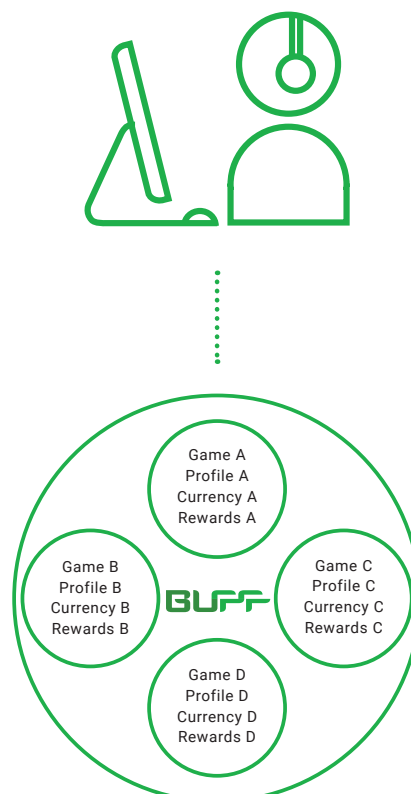
BUFF will address this issue via its partnership with Overwolf, who has already developed the technology for collecting in-game data and analyzing the data in real-time.

Expanding partnerships with game publishers as part of BUFF's loyalty program.

In order to have a large number of digital goods which gamers can redeem using BUFF coins, additional game publishers will be required to take part in the platform. Since BUFF already has agreements via the Overwolf relationship with several leading game publishers, and as its team consists of industry-renowned professionals, the assumption is that a growing number of game publishers will join BUFF's loyalty program in parallel to the system's expansion and user growth.

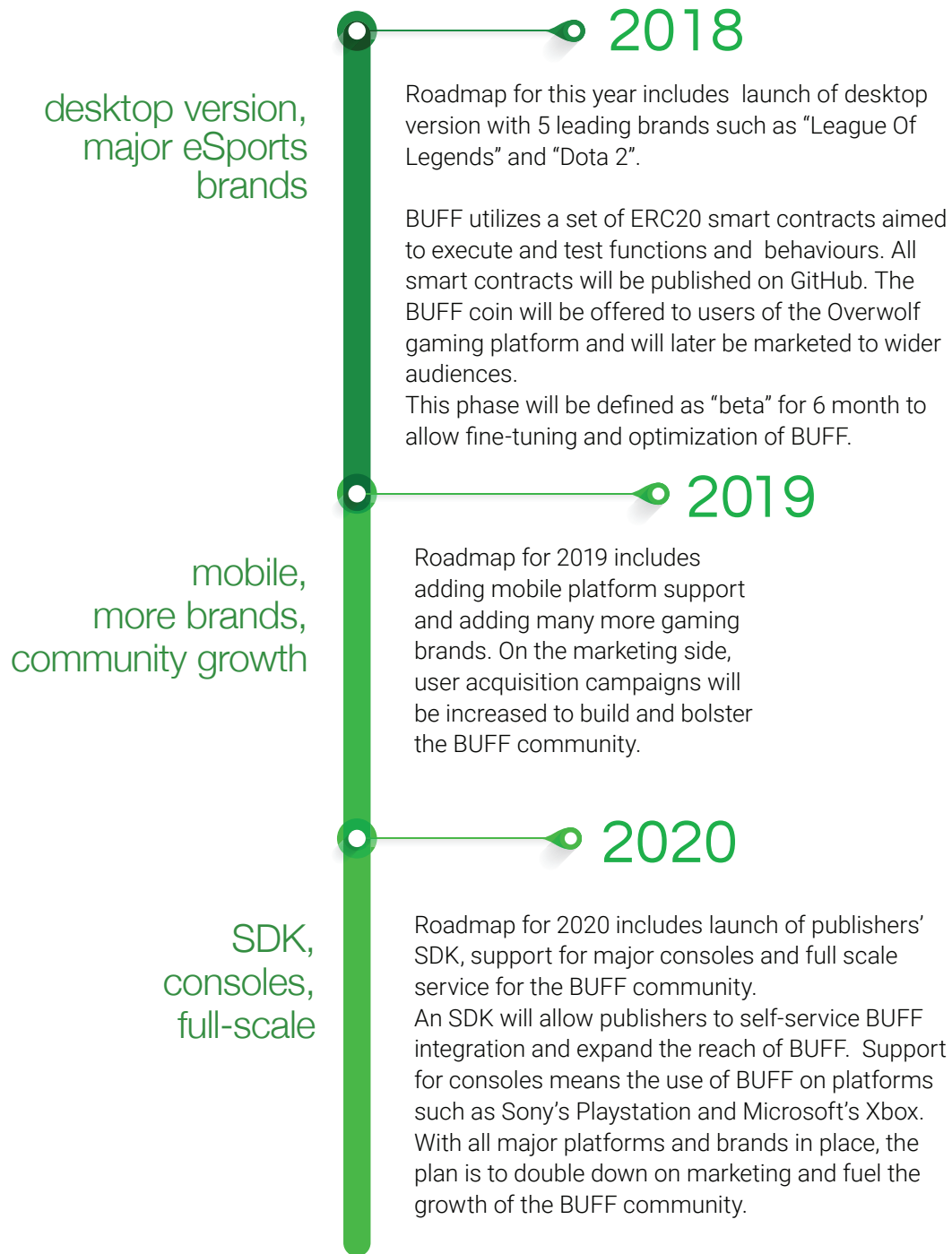
Slow market penetration

Introducing a new product or concept to an existing industry might take considerable time. BUFF will borrow from Overwolf's infrastructure with its more than 15 million users in order to hasten the growth of BUFF's community and reach mass audiences.



Roadmap

This is BUFF's development, launch and expansion plan year by year.



2018 - desktop version, major eSports brands

IMAGE	RANK	TITLE	TOTAL HOURS	ESPORTS HOURS	SHARE ESPORTS	CHANGE
	1	Counter-Strike: Global Offensive	69.6M	55.0M	79%	1 ▲
	2	League of Legends	88.9M	13.7M	15%	1 ▲
	3	Overwatch	32.5M	13.6M	42%	5 ▲
	4	Dota 2	30.9M	9.5M	31%	3 ▼
	5	Hearthstone	35.0M	5.3M	15%	1 ▼
	6	FIFA 18	10.3M	2.1M	20%	21 ▲
	7	Smite	4.2M	1.8M	42%	8 ▲
	8	StarCraft II	4.2M	1.6M	39%	1 ▼
	9	Call of Duty: WWII	4.7M	1.5M	32%	4 ▼
	10	Heroes of the Storm	5.8M	1.1M	19%	8 ▲

We will aim for the beta version includes at least 5 of the leading eSports most popular game titles ¹³

Roadmap for this year includes launch of desktop version with 5 leading brands such as "League Of Legends" and "Dota 2".

BUFF utilizes a set of ERC20 smart contracts aimed to execute and test functions and behaviours. All smart contracts will be published on GitHub and audited by a qualified third party, and the findings will be publicly stated. The BUFF coin will be offered to users of the Overwolf gaming platform and will later be marketed to wider audiences.

This phase will be defined as "beta" for 6 months to allow fine-tuning and optimization of BUFF.

2019 mobile, more brands, community growth

Roadmap for 2019 includes adding mobile platform support and adding many more gaming brands. On the marketing side, user acquisition campaigns will be increased to build and bolster the BUFF community.

2020 SDK, consoles, full-scale

Roadmap for 2020 includes launch of publishers' SDK, support for major consoles and full scale service for the BUFF community.

An SDK will allow publishers to self-service BUFF integration and expand the reach of BUFF. Support for consoles means the use of BUFF on platforms such as Sony's Playstation and Microsoft's Xbox.

With all major platforms and brands in place, the plan is to double down on marketing and fuel the growth of the BUFF community.

13. <https://newzoo.com/insights/rankings/top-games-twitch/>

The BUFF Team

Core Buff Team



Elay De Beer

CEO

Formerly the CEO of Allaspect, a novel AI digital marketing solution, and with more than a decade of experience in the online development sphere from startups to publicly traded companies (the majority of which in senior management positions), Elay brings invaluable knowledge and expertise in running and managing development projects from start to finish.



Michael Avni

CMO

Michael is an entrepreneurial-minded senior executive with extensive experience in cutting-edge online ventures. With his proven managerial track record of overseeing marketing and sales for large internet companies [HPQ,888], Michael brings in-depth knowledge of direct-response online operations to the table.



Ophir Sarapi

COO

Ophir brings more than a decade's worth of experience in senior management positions, including that from his role as president of AllAspect digital ad agency. The combination of Ophir's accumulated business experience and his myriad managerial skills makes him one of the most efficient COO's in the industry.



Ophir Gertner

BizDev

An entrepreneur at heart, Ophir has a strong track record of developing market-leading products, including Stox.com blockchain predictions and Invest.com, which he cofounded.

Chosen as one of the top Blockchain influencers in Israel, Ophir is renowned in the Blockchain industry and is considered one of the most sought-after advisors for decentralized projects.

The BUFF Team

Core Buff Team



Emmanuel Aziel

CFO

Emmanuel is a certified CPA, with an MBA degree. Emmanuel is a certified CPA, with an MBA degree. Experienced financial executive with more than 20 years of activity, worked in global corporations, from startups to publicly traded companies. Worked in Telecommunication, Gaming and Online Advertising firms. Emmanuel diversified background and vast experience makes him a perfect fit to BUFF.



Guy De Beer

Game Publisher Relations

As the former CEO of Playcast cloud gaming (acq Gamefly), Guy is an experienced senior industry figure with valuable, in-depth knowhow for establishing partnerships and alliance formations with leading global game developers, product branding, and managing and defining technology development and productization.



Ivan Didur

Chief Architect

Ivan has more than 4 years' experience in developing private blockchains, 5 years' experience with AI, Big Data and Distributed Systems, and an ongoing research in the federated reinforcement learning field. He is the CTO and Co-Founder of DataRoot Labs – one of the largest AI & Big Data teams in Ukraine; serves as an associate professor at the blockchain school in Kiev, and is one of the most sought after minds in the Blockchain development community.



Oron Zell

Marketing Communication

Oron is a veteran internet entrepreneur who has already cofounded successful online ventures with worldwide reach, including Glassesusa, Mash Group, and most recently, Apply, an online marketing platform. Oron has extensive online marketing experience and insight gained through work on his globally recognized brands.



Ilya Shusterman

Software Developer

Ilya is a software engineering graduate with experience in developing private blockchains, machine learning engineering, development in bank systems with moneyrelated security tasks, and is a passionate team player. His passion for crypto-currency began in 2016 with his role in developing and working with large crypto trading exchanges (wex.nz , bittrex.com, bitfinex.com binance.com). Today, he remains updated and highly motivated in the blockchain era.

The BUFF Team

Core Buff Team



Nir Zavaro

Social and marketing

Experienced Chief Executive Officer with a demonstrated history of working in the management consulting industry. Skilled in digital strategy, business planning, advertising, sales, and E-commerce, Nir manages the social efforts of BUFF.



Rona Yakobi

Creative Director

Creative Director

Rona is a uniquely creative mastermind, bringing years of experience to McCann Erickson, a leading global agency. She has managed international branding and creative projects and has the ability to take a rough concept and build the entire branding strategy around it. Rona is the brand and creative director behind BUFF.

Overwolf Team



Uri Marchand

CEO - Overwolf Gamers App overlay

Uri is an entrepreneurial leader with a track record of getting things done. Experienced in leading and executing complicated projects in challenging environments, Uri holds a unique understanding of software products management, technological development, business models and online marketing.



Alon Rabinovitz

VP of Platform

Alon has a degree in computer science and as part of his position as VP of Platform at Overwolf, he holds an extensive track record of managing and designing gaming products. He will bring this accumulated knowledge and expertise to BUFF as he supervises the User Facing BUFF App.



Tom Wolf

Tom Wolf

With more than 14 years of professional software development and project management experience and 8 years of managing software development teams, Tom will lead the BUFF-related Overwolf development.

The BUFF Team

Overwolf Team



Avner Florenthal

Head of BI

BUFF economy & rewards protocol strategist

Avner holds a bachelor's degree in economics and an M.B.A in management of technology, entrepreneurship & innovation. He is the Head of Business Intelligence at Overwolf, and will oversee BUFF's economy & rewards protocol strategy.



Yuval Gelbard

Product Manager

Yuval has over 10 years' experience in UX designs and product delivery. In addition, he is the Head of the Game Design and UX program at the Open University of Israel. Yuval has joined forces with the BUFF team to create and define the product UX .



Lili Ben-Shalom

Senior Product Manager

Lili has vast experience in planning and end-to-end agile project management, including interfacing with internal and external parties (vendors, clients and partners). A team player who thrives under pressure and is deeply familiar with social web applications and related business implementations, Lili will support BUFF product roadmap development.



Sophie Duval

Community Manager

Sophie is a multilingual community manager and a graduate of Charles de Gaulle University with a degree in Germanic languages, literature and linguistics. With years of experience in managing online communities, Sophie will engage with the Overwolf community to gain traction for the BUFF app.



Erez Reznikov

UI Designer

Erez has a Bachelor's of Design in visual communications from Shenkar college, and he has been a teacher of interaction design courses and a lecturer of graphic design, typography and UX. Erez takes an active role in BUFF to design and define the cross-device application.

The BUFF Team

Advisory



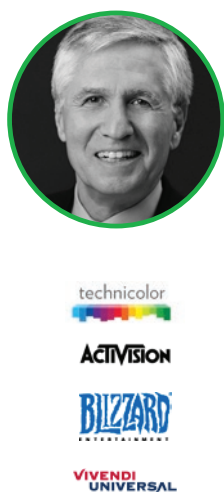
Jonathan Simpson-Bint

Jonathan run the revenue and some of the biggest partnerships at Twitch - the world's largest platform and community for the live streaming of games. Jonathan joined the company in late 2011 and spent much of the next year evangelizing the companies SDK strategy to the games market, meeting both publishers and developers persuading them to build Twitch functionality directly in to their games. Today the +SDK program is a robust, multi platform part of Twitch's strategy and partners include Sony, Activision, Blizzard, Take Two and Electronic Arts as well as a plethora of indie publishers. In late 2012, Twitch was built directly in to the mammoth selling Call of Duty: Black Ops 2 as well as in to every EA game via Origin.



Rob Dyer

Rob is a renowned senior executive in the video gaming market, who significantly contributed to the growth of the industry as well as formed an integral part in some of the largest corporate transactions within the interactive entertainment industry, including negotiating the sale of Crystal Dynamics to Eidos for \$50M; overseeing the \$100M sale and merger of Crave Entertainment by Handleman; and developing multimillion content distribution deals and development partnerships for ZYNGA, Sony, Disney, and EIDOS INTERACTIVE.



Bruce Hack

Chairman of the board at technicolor; advisor for start-up and mid-stage online media and entertainment companies; early/mid-stage investor in video games, eSports, VR/ AR, music, sports, publishing, education and medical sectors; member of the New York Angels; guest lecturer on leadership and entrepreneurship at Stanford and Princeton; and member of Cornell A&S Advisory Council. Mr. Hack was Vice Chairman of the Board of Directors and Chief Corporate Officer of Activision Blizzard until 2009. Prior to that, Mr. Hack was Chief Executive Officer of Vivendi Games from 2004 to 2008, Vice Chairman of the Board of Directors of Universal Music Group from 1998 to 2001, and Chief Financial Officer of Universal Studios from 1995 to 1998. From 1982-1994, Mr. Hack held several positions at The Seagram Company, including Assistant to the Executive Vice President; Sales and Marketing for Seagram USA; Director of Strategic Planning at The Seagram Company Ltd.; and Chief Financial Officer of Tropicana Products, Inc. Prior to this, he was a trade negotiator for the U.S. Treasury. Mr. Hack earned a B.A. at Cornell University and an M.B.A. in finance at the University of Chicago.

The BUFF Team

Advisory



Michael Vorhaus

Aol.



After 15 years of leading work in university transfers of technology (Caltech) and fundraising, Mr. Vorhaus joined Magid Advisors to build a consulting and research practice in the internet, new media and digital entertainment spaces, including gaming on all platforms. He previously worked in the Carter and Clinton White Houses and on Capitol Hill.

Magid Advisors has been very successful in the internet and gaming spaces. Mr. Vorhaus began working with AOL in 1995 and has completed over 3,000 engagements for top internet companies, large traditional media companies moving into new media, and many of the top console, PC and gaming companies.

Magid Advisors provides investment, acquisition and strategic advice to operating companies, investment firms, private equity firms, and venture capital firms, and has conducted a large number of due diligence engagements regarding billions of dollars of media acquisitions in the last few years.



Gina Ramirez

APA

Prior to APA, Gina was Director of Talent for Activision where she handled high level talent deals for the publisher. Among the star power she brought to the CALL OF DUTY franchise was Kevin Spacey, Chris Evans, Megan Fox, John Malkovich, Heather Graham and Jeff Goldblum. Before Activision Gina was a Video Game Agent at UTA where she worked with game publishers, representing their properties for sale to studios to be adapted into multiple formats including feature films, television series, and web series. Gina also represented a number of game developers and writers, as well as handled business development for game-centric companies such as King.com (acquired by Activision), Nyko Technologies, Caesars Entertainment, and others. Gina earned a B.A. from the University of Southern California. She is a member of Aircraft Owner's and Pilot's Association and Women in Film.



Aries Wang

BLOCKWATER
CAPITAL



A serial entrepreneur and investor who has founded and invested couple successful start-ups including cross-border payment company Gopay.pro. He started to involve in cryptocurrency since 2013.

Now, he is the co-founder of Bibox in charge of global operations. Also, he has recently founded BlockWater Capital to invest in early stage blockchain companies.

The BUFF Team

Advisory



Guy Gussarsky

Guy brings years of executive experience and holds a dual degree in law and accountancy from the Hebrew University. Guy was the Executive Vice President of Sales and Business Development at Deltathree (NASDAQ: DDDC), a VOIP provider. Later, Guy served as the CEO of Mansion Group, an online gaming provider based in Gibraltar. Guy is an active board member and investor in various online and offline companies.



Anthony Provasoli

Anthony Provasoli is a partner in Hassans' (based in Gibraltar) corporate and commercial department and coleads the firm's fintech team. Anthony's expertise in fintech and his particular interest in Blockchain and cryptocurrency make him stand out as a leading practitioner in this field. Additionally, Anthony acts as an advisor to Modex. Anthony is a graduate from Nottingham Trent University and was called to the bar in England and Wales and the Gibraltar Bar in 2005. He specialises in corporate, commercial and financial service matters and also advises on matters of sports law, intellectual property, e-commerce and telecommunications regulation



Jay Cohen

An industry veteran with over 19 years' experience, Jay Cohen is currently the General Manager of Wargaming America, the exclusive North and South America publisher providing marketing, public relations, business development, and community and customer support services for all of Wargaming.net's video game titles. At Wargaming, Jay is credited with developing and executing the business strategy and operations for one of the fastest growing brands in the gaming industry. Prior to Wargaming, Cohen served as Chief Revenue Officer and Advisory Board Member of Playnomics, a predictive data and marketing platform for free-to-play games and apps. He also held a variety of significant leadership positions including Senior Vice President of Publishing at Ubisoft Entertainment for over 13 years, and President of Development at Jerry Bruckheimer Games. Jay was also Chairman of the Board for the Academy of Interactive Arts and Sciences from 2006 – 2014, the organization that hosts the prestigious D.I.C.E Awards, and worked with industry executives from Sony, Microsoft, Nintendo and Electronic Arts to help guide the organization that recognizes and honors outstanding accomplishments in game design, innovation and development.



The BUFF Team

Advisory



Jeff Hilbert



Jeff has been intimately involved in working with independent game development studios and publishers in the game industry for over twenty years. He is internationally recognized as one of the top business executives in the video game industry, having secured in excess of USD \$950 million in funding for development studios directly or through his companies. Jeff provides unparalleled business development and management expertise and possesses the valuable distinction of having represented publishers, distributors and developers through the deal process. Jeff most recently founded Starting Point (www.startingpointgames.com) to work more directly with a few select partners as part of their executive staff and as an active board member. Prior to Starting Point, Jeff founded DDM (www.ddmagency.com) which quickly became the top video game agency in the world, where he still serves as an active board member.



Tal Cohen

McKinsey&Company



SIRIN LABS



Tal Cohen is an avid gamer ever since he had his first computer many years ago. His first start up, ibetcha.com, was a peer to peer play for fun betting platform which was acquired by Vivendi Universal Games in 2000. Tal has been involved in the Blockchain space since early 2017, and has consulted to various companies in this space, including Fusion.org, a leading cross blockchain financial platform. Prior to this Tal was the CEO and Co-Founder of Sirin Labs, and earlier in his career was a consultant at McKinsey & Co and an Industry Manager at Google Israel. Tal holds an LLB from the Hebrew University in Jerusalem.

The BUFF Team

Advisory



Brandon Xavier

computer scientist and entrepreneur, Brandon Xavier majored in computer science at the Staffordshire University in UK and holds an MBA from the University of Toronto. His professional background spans over 20 years in IT, having started with the launch and sale of his web hosting company in 1996. Engagements in the telecom sector followed, where he led Apple, Blackberry, and Windows Mobile service launches in Canada, and subsequently in technology consulting with Ericsson. His passion for cryptography and decentralized systems began in 2014 and has led to engagement in Solidity development, consulting in decentralized exchange models that address counterparty risks, and his current direct involvement in the upcoming launch of two blockchain and crypto-related projects. Brandon currently holds a US software patent on visual privacy in messaging systems.



Brad Yasar

Brad is an entrepreneur, investor, mentor, and advisor who has started and bootstrapped several companies from inception to maturity over the past 20 years. Brad is currently the co-founder and Managing Partner of Krowd Mentor, a strategic crowdfunding advisory firm focusing on ICOs, cryptocurrencies, blockchain, and token powered organizations.

As the co-founder of Blockchain Investors Consortium (BIC) with over 5 Billion dollars allocated to blockchain and cryptocurrency projects and has access to extensive deal flow and experience analyzing disruptive technologies, Brad has participated in dozens of successful crowd sales, which have raised over \$500 million from 10,000s of investors since 2016.



Gil Shoham

Gil Shoham is a Cofounder of ironSource. With an extensive online media background, Gil is a sought-out speaker and thought leader on mobile monetization.

In 2009, Gil co-founded Supersonic to enable mobile developers the tools to help build their app businesses. The company merged with ironSource in 2015 to create what is now the largest independent app discovery platform. IronSource Developer solutions empowers over 80K app developers; IronSource Enterprise Technology ships on hundreds of millions of devices worldwide, giving the company a reach of over 800 million unique users every month, globally. Prior to ironSource, Gil was the VP of Media at Matomy Media Group, a publicly traded performance-based digital marketing outfit. Before that Gil was General Manager of Metacafe International Media where he lead video ad monetization and brand advertising sales for metacafe.com.

RESPONSIBILITY STATEMENT

To the best of the knowledge and belief of the BUFF executive team (whose names appear on BUFF team section of this White Paper, they have taken reasonable care to ensure that the information contained in this document is in accordance with the facts, and does not omit anything likely to materially affect the import of such information.

The Key Person(s) will ensure that BUFF Technologies Limited (the “Company”) undertakes the following:

1. The Company will engage a qualified third party to audit the smart contract that will be used to issue the ERC20 tokens following the Token Generation Event;
2. The Company will make use of the proceeds of the Token Generation Event solely for the purposes set out in the White Paper or otherwise for the proper management and operations of the Company;
3. The Company will agree a reasonable and realistic budgeted forecast of expenditure (“Forecast”) with its auditor after the Token Generation Event;
4. The Company will store cryptocurrencies raised from the Token Generation Event in a secure wallet and endeavour to appoint a reputable independent person or entity to act as one of the co-signatories to that wallet. The Company will only release-stored cryptocurrencies from the secure wallet for the purpose of satisfying expenditure budgeted for in the Forecast. On a quarterly basis a certified third party auditor shall review the expenditure over the previous quarter to ensure it is in line with the budgeted forecasts. If expenditure over 20 % of that in the budgeted forecast has been made, the Company will make an announcement of that fact on its website. In no event may the Company make expenditure over 40% of the budgeted forecast unless the company nominated auditor has been notified in advance and has confirmed in writing to the Company that it is satisfied the monies are being utilised for the proper purposes of the Company.
5. The Company agrees that should it become evident that the Company’s project as described in the White Paper (the “Project”) is not achievable or is no longer viable (economically or otherwise) within reasonable time-frames bearing in mind the scheduled operational launch of the Project as set out in the White Paper, the Company will:
 - (i) determine to effect an orderly wind-up of its business unless it has received independent legal advice that such action is not in the best interests of token-holders (“Continuation Advice”);
 - (ii) where Continuation Advice has not been obtained, proceed to an orderly wind-up of business by paying outstanding creditors and allocating a reasonable amount of any remaining Token Generation Event proceeds to provide for an orderly wind-up of the Company and its operations (including but not limited to meeting the Company’s liabilities and any obligations); and
 - (iii) thereafter implement an ethical and fair means of returning the balance value of token proceeds in the Company’s possession, such as by repurchasing the tokens that are then in issue to current token holders,

in all events subject to independent legal advice.

If you no longer hold the tokens, it is unlikely you will receive any monies from the above process.

The Company urges you to read the “Legal Considerations, Risks and Disclaimer” section in full at the end of this White Paper.

LEGAL CONSIDERATIONS, RISKS AND DISCLAIMER

IMPORTANT NOTICE: PLEASE READ THE ENTIRETY OF THE “Legal Considerations, Risks and Disclaimer” SECTION CAREFULLY. WE RECOMMEND YOU CONSULT A LEGAL, FINANCIAL, TAX OR OTHER PROFESSIONAL ADVISOR(S) OR EXPERTS FOR FURTHER GUIDANCE PRIOR TO PARTICIPATING IN THE TOKEN GENERATION EVENT OUTLINED IN THIS WHITE PAPER. YOU ARE STRONGLY ADVISED TO TAKE INDEPENDENT LEGAL ADVICE IN RESPECT OF THE LEGALITY IN YOUR JURISDICTION OF YOUR PARTICIPATION IN THE TOKEN GENERATION EVENT. YOU SHOULD NOTE THAT IN THE TOKEN GENERATION EVENT TERMS AND CONDITIONS (AVAILABLE AT: WWW.BUFF.GAME) THAT YOU ARE ACKNOWLEDGING AND ACCEPTING AND REPRESENTING AS PART OF THE PROCESS TO PARTICIPATE IN THE TOKEN GENERATION EVENT THAT YOU HAVE INDEED TAKEN INDEPENDENT LEGAL OR OTHER PROFESSIONAL ADVICE.

Please note that this is a summary of the legal considerations, risks and disclaimers document which can

be found at: www.buff.game and which you must read in full prior to: (i) making use of this White Paper and any and all information available on the website(s) of BUFF Technologies Limited (the “Company”) and/or (ii) participating in the Company’s Token Generation Event outlined in this White Paper (the “Token Generation Event”). Any undefined capitalised terms below shall have the meaning set out in the “Legal Considerations, Risks and Disclaimer” section. This summary should not be relied on in place of reading the “Legal Considerations, Risks and Disclaimer” section in full.

The “Legal Considerations, Risks and Disclaimer” section, the full version of which can be found at: www.buff.game applies to this White Paper and any and all information available on the Website. The contents of the “Legal Considerations, Risks and Disclaimer” section outlines the terms and conditions applicable to you in connection with: (i) your use of this White Paper and of any and all information available on the Website; and/or (ii) your participation in the Token Generation Event, in each case in addition to any other terms and conditions that we may publish from time to time relating to this White Paper, the Website and the Token Generation Event (such terms hereinafter referred to as the “Terms”).

The information set forth in the “Legal Considerations, Risks and Disclaimer” section may not be exhaustive and does not imply any elements of a contractual relationship. While we make every reasonable effort to ensure that all information: (i) in this White Paper; and (ii) available on the Website (all the information in the White Paper and all information available on the Website hereinafter referred to as the “Available Information”) is accurate and up to date, such material in no way constitutes professional advice.

The Company does not recommend purchasing Tokens for speculative investment purposes. Tokens do not entitle you to any equity, governance, voting or similar right or entitlement in the Company or in any of its affiliated companies. Tokens are sold as digital assets, similar to downloadable software, digital music and the like. The Company does not recommend that you purchase Tokens unless you have prior experience with cryptographic tokens, blockchain-based software and distributed ledger technology and unless you have taken independent professional advice.

LEGAL CONSIDERATIONS, RISKS AND DISCLAIMER

Citizens, nationals, residents (tax or otherwise) and/or green card holders of each of: [(i) the United States of America; (ii) Singapore, (iii) South Korea, (iv) the People's Republic of China;] or any other jurisdiction which prohibits the possession, dissemination or communication of the Available Information and/or prohibits participation in the Token Generation Event or the purchase of Tokens or any such similar activity or any other Restricted Persons are not permitted to participate in the Token Generation Event

In no event shall the Company or any current or former Company Representatives be liable for the

Excluded Liability Matters.

The Company does not make or purport to make, and hereby disclaims, any representation, warranty or undertaking in any form whatsoever to any entity or person, including any representation, warranty or undertaking in relation to the truth, accuracy and completeness of any of the information set out in the Available Information.

You should carefully consider and evaluate each of the risk factors and all other information contained in the Terms before deciding to participate in the Token Generation Event.

YOU MAY LOSE ALL MONIES THAT YOU SPEND PURCHASING AIM TOKENS. IN THE EVENT THAT YOU PURCHASE TOKENS, YOUR PURCHASE CANNOT BE REFUNDED OR EXCHANGED.

THERE IS NO GUARANTEE THAT THE UTILITY OF THE AIM TOKENS OR THE PROJECT ENVISAGED IN THIS WHITE PAPER WILL ACTUALLY BE DELIVERED OR REALISED.

YOU ARE WAIVING YOUR RIGHTS BY AGREEING TO THESE TERMS AND CONDITIONS AND PARTICIPATING IN THE BUFF TECHNOLOGIES LIMITED TOKEN GENERATION EVENT. BY PARTICIPATING IN THE BUFF TECHNOLOGIES LIMITED TOKEN GENERATION EVENT YOU ARE AGREEING TO HAVE NO RECOURSE, CLAIM, ACTION, JUDGEMENT OR REMEDY AGAINST BUFF TECHNOLOGIES LIMITED IF THE UTILITY OF THE AIM TOKENS OR IF THE PROJECT DESCRIBED IN THIS WHITE PAPER IS NOT DELIVERED OR REALISED.

IF YOU ARE UNCERTAIN AS TO ANYTHING IN THIS WHITE PAPER OR YOU ARE NOT PREPARED TO LOSE ALL MONIES THAT YOU SPEND PURCHASING BUFF TOKENS, WE STRONGLY URGE YOU NOT TO PURCHASE ANY BUFF TOKENS.

AIM TOKENS ARE NOT SHARES OR SECURITIES OF ANY TYPE. THEY DO NOT ENTITLE YOU TO ANY OWNERSHIP OR OTHER INTEREST IN BUFF TECHNOLOGIES LIMITED. THEY ARE MERELY A MEANS BY WHICH YOU MAY BE ABLE TO UTILIZE THE AIM PLATFORM THAT IS YET TO BE DEVELOPED. THERE IS NO GUARANTEE THAT THE AIM PLATFORM WILL ACTUALLY BE DEVELOPED.

PLEASE READ THE ENTIRETY OF THIS "LEGAL CONSIDERATIONS, RISKS AND DISCLAIMER" SECTION OF THE WHITE PAPER CAREFULLY.